Unit Title: Natural Language Processing for the Creative Industries

Project Proposal

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Introduction

Hi, this is Yuyang Ma from Modular.

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I wasn't able to successfully do the project in the Example projects, so I chose a project that I had come across before and was related to this topic, a CNN-based project for 10 types of object recognition. For colorful images, it is more efficient to use CNN. In this project, I used the Cifar 10 dataset.

I actually write my comments, broad framework and logic, and ideas in my code. Please refer to my code for more details. I think that fits the description better.

Description

Here is my logical framework.

1. Import the data, import the Three Musketeers and Tensorflow;
2. Load the dataset cifar 10, for training and calibration data, receiving and splitting data
3. Split the data and take 5,000 as check data, same with x&y
4. Check the shape
5. Draw one for checking, and add a title
6. Do a pre-processing of the data set

7. Normalize the data to narrow down the range, into a floating point shape, two-dimensional, reduced, receive

8. Defining Convolutional Neural Networks.

   (1) 2 convolutions, one pooling, three repetitions, total 3 layers of operations

   (2) Flattening

   (3) Fully connected

9. Configuring the network

10. Training model

11. Watch the data trend, draw a picture

12. Network optimization, output charts

    (1) Add dropout to reduce overfitting.

    (2) 2 convolutions, one pooling, three repetitions, total 3 layers of operations

    (3) Flattening

    (4) Fully connected

Conclusion

👉👉👉👉**Training data is 83.9% and calibration data is 70.6%**👈👈👈👈👈👈

After adding dropout to reduce overfitting

👉👉👉👉Training data is 87.2% and calibration data is 79.7%👈👈👈👈👈👈